CRWA

Saving the Charles River since 1965

August 15, 2013

Newton Tedder
US EPA Region 1
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Dear Mr. Tedder,

Charles River Watershed Association (CRWA) has reviewed the draft Small Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) general permit for New Hampshire (draft permit) and submits the following comments.

CRWA is a research and advocacy organization, formed in 1965 in response to public concern about the declining condition of the Charles. We work extensively on stormwater pollution issues, and in particular have conducted research and modeling on phosphorus pollution in the Charles River; undertaken wet weather end-of-pipe and receiving water monitoring programs; and designed and constructed stormwater improvement projects. We work in partnership with agencies, municipalities and organizations across the country, and have focused on stormwater issues throughout the Region 1 area.

## General

CRWA has reviewed the draft permit with interest as it reflects EPA's significant commitment to the progress that has been made in the past decade in the science and regulation of stormwater management in the New England region. It is widely acknowledged that stormwater is one of the main sources of pollution to the nation's surface waters. It has also been amply demonstrated through research, demonstration projects and several successful state and municipal stormwater programs that stormwater pollution can be significantly reduced, resulting in measurable improvements in receiving water quality, habitat restoration, and improved hydrologic function.

The MS4 general permit is an important regulatory tool, and when paired with additional stormwater regulatory programs and permits, provides meaningful protections for surface waters. The MS4 program in New England, however, is past due for revision and improvement. The current permits, dating from 2003, do not reflect best current practice for municipal stormwater management, and certainly do not result in achievement of water quality standards. Over the past five years, there has been significant discussion, review and public input to EPA about proposed updates to the MS4 program, and EPA has responded in exhaustive detail. Small MS4 permittees have had ample



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opportunity to develop stormwater management programs over time, and have also had many years to prepare for the more stringent requirements that will be necessary to meet the objectives of the Clean Water Act. We strongly encourage EPA to move forward with planned updates and improvements to all stormwater permit programs, in particular the MS4 general permit.

CRWA is supportive of the draft permit, and we believe it will help improve water quality in New Hampshire's water bodies and provide permittees with clear guidance and support for their stormwater management programs. In particular, we note the highly detailed technical analyses undertaken by Region 1 staff and their consultants to understand and share with permittees and the public the physical, technical and fiscal implications of the new permit. We believe the tools and guidance documentation EPA has provided to assist municipalities in developing sound, fiscally responsible programs will be of tremendous benefit. By providing standardized methodologies for permittees to estimate current loads, and the reductions they can achieve using a variety of measures, EPA has also created a fair and level playing field, reduced the burden on permittees to develop their own methodologies, and provided permittees with certainty that their programs, if developed using these tools, will comply with the permit.

We urge EPA Region 1 to move forward expeditiously to finalize this permit, and to move ahead with planned revisions to the many stormwater permits in the Region that have not been updated since 2003. We provide below a number of specific comments by section to assist EPA in finalizing the permit.

## Comments by section of the draft permit

### 1.10 Stormwater Management Program (SWMP)

We suggest 1.10 c. be either modified or eliminated. By providing a permit condition that encourages but does not require adequate funding for the program, EPA provides the appearance of a potential loophole for permit compliance. If the permit cannot be modified to *require* adequate funding, this section should be removed. The development of a compliant program is a requirement of the permit and failure to identify sources of funding cannot be used as an excuse not to do so.

### 1.10.2 Contents of the Stormwater Management Program

This section should contain language requiring the permittee to use (or at a minimum demonstrate that they have considered using) Low Impact Development (LID) and Green Infrastructure (GI) techniques as part of their program to comply with 2.0, 2.1 and 2.2, as has been required to demonstrate compliance in 2.3.5. If they do not use LID or GI techniques as part of their program to comply with water quality standards (section 2.1) and discharges to impaired waters (section 2.2), they should discuss why they have been determined not to be feasible. Current best practice in stormwater management in urbanized areas clearly includes the use of LID and GI, and many EPA approved programs including CSO Control Plans, Settlement Agreements and Consent Decrees require LID and GI practices. EPA states on its own website: "Since 2007, EPA's Office of Water has released four policy memos supporting the integration of green infrastructure into NPDES permits and CSO remedies.[1]" The LID and GI requirements should also be specified in sections 2.2.1.g and 2.2.2.a.ii.

[1] http://water.epa.gov/infrastructure/greeninfrastructure/gi_regulatory.cfm



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2.3.4 Illicit Discharge Detection and Elimination (IDDE) Program

CRWA strongly supports the revised methodology and detailed approach to the IDDE program in the draft permit. Illicit discharges remain a persistent problem, and an aggressive, standardized approach to detection and elimination is necessary to achieve water quality standards and reduce the impacts of stormdrains and sanitary sewer systems on receiving waters.

2.3.4.4 Sanitary Sewer Overflows

CRWA suggests the language and requirements in this section be strengthened, with a particular focus on locations where repeated SSOs are identified. In spite of the permit specifications that SSOs are a violation of the permit, the primary requirements of this section remain focused on inventorying and reporting SSOs. Although the later subsections detail inspection, mapping and sampling protocols that will assist in SSO remediation, specific remediation requirements should be made in this section. In practice, many municipalities have ongoing and recurring SSOs and they are not moving expeditiously to eliminate them, nor are they aggressively taking interim mitigation measures to minimize the discharge of pollutants unless EPA begins enforcement proceedings. As the permit does in other sections, we suggest that specific required mitigation measures for areas with recurring SSOs be spelled out in this section.

2.3.4.8.h Illicit Discharge Prevention Procedures

As stated above, we suggest this section also be strengthened to include specific measures that should be taken to remediate SSOs.

2.3.6 Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)

CRWA encourages EPA to modify this section to state that the program should apply to new development or redevelopment projects that disturb one or more acres of land, *or less if determined appropriate by the permittee…* (italics added). Many municipalities are highly developed and may have passed or wish to pass post-construction stormwater control ordinances for projects that redevelop sites that are less than an acre. They should be encouraged and explicitly allowed to do so.

2.3.6.8 Directly Connected Impervious Area

CRWA strongly supports the inventorying and reporting of IA, including tracking changes in IA over time, and the retrofitting of IA to reduce stormwater runoff. However we are not confident that at this time there are clear and widely accepted practices for estimating DCIA. As a result, it is not clear that this requirement will benefit stormwater management programs and may create confusion, conflicting approaches, and unenforceable conditions on permittees. We suggest that, for this permit cycle, this section be modified to eliminate DCIA and to focus on IA only.

2.3.7 Good Housekeeping and Pollution prevention for Municipal Operations

2.3.7.1.a should include an evaluation of areas where there is existing or potential erosion, and the development of a remediation plan. Soil erosion is significant in many parks and open spaces, and often represents a highly effective and inexpensive opportunity for municipalities to reduce stormwater



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pollution, and phosphorus loading in particular. The section should include reference to 2.3.7.2.b.iv, the SWPPP.

2.3.7.1.d.ii The language in different bullets of this section is confusing and should be clarified. It is not clear if all catch basins should be kept below 50% full, or if this only applies to certain catch basins. CRWA suggests that catch basin sumps should always be kept no more than 50% full, regardless of whether the receiving water is impaired or has a TMDL.

2.3.7.1.d.iii CRWA suggests that once a year street sweeping operations are entirely inadequate. An absolute minimum of twice per year sweeping should be required to demonstrate any effort at good housekeeping.

Appendix F: Requirements of Approved Total maximum Daily Loads

Lake and Pond Phosphorus TMDLs

CRWA is strongly supportive of the development of the detailed appendix and related attachments to assist in the development of phosphorus control programs (PCPs) that are compliant with the permit and achieve phosphorus reductions consistent with wasteload allocations (WLAs) in TMDLs.

There is one major problem in the draft methodology: the phosphorus reduction credit granted to permittees for IDDE is inconsistent with the methodology used to estimate the existing phosphorus load, and does not appear to be consistent with the way WLAs were calculated in phosphorus TMDLs. EPA should either remove this credit altogether, or at a minimum establish a very low maximum percentage of the overall phosphorus reduction requirement that can be achieved with an IDDE program. This is especially important in the case of a general permit, where highly detailed site specific data is not being used to establish permit requirements.

Watershed models, TMDLs and watershed assessments by the nature of their scale and design, use well-established methodologies for estimating typical or average stormwater pollution loads and apply these rates across a broad area based on land use types, topography, soils and other statistically relevant factors. Even models that use more detailed hydrologic routing, rainfall data, and dynamic in-stream processes rely on some averaged or typical measured concentrations which are applied across a modeled area. Illicit cross connections are sporadic, geographically isolated, and difficult to separate out from other sources of stormwater pollution in a modeled condition. They are not generally included in such models except as they may influence the overall average concentration of a pollutant in stormwater.

Furthermore, TMDLs do not include a WLA for illicit cross connections because they are not allowed under the permit and thus cannot have a maximum daily load allowance.

Since illicit connections have not been explicitly included in estimating existing loads, it is not appropriate to give them credit when estimating reductions. To allow a virtually unlimited credit towards phosphorus removal in a PCP that is intended to comply with a TMDL appears to give them credit under the WLA. Furthermore, from a practical perspective, CRWA has demonstrated with sampling and modeling that stormwater loads – even those with no apparent cross connections whatsoever – can still cause significant violations of water quality standards in receiving waters.



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Clearly, the MS4 general permit is intended to focus on a permittee's stormwater management, and its phosphorus reduction credits should reflect improvements in stormwater control and treatment, not basic, required corrections of failing sewage infrastructure.

Attachment 2

CRWA applauds EPA for developing calculation methods and tools that are sufficiently robust to provide a high level of confidence they will achieve required control levels, and yet are simple enough to be of great assistance to permittees, providing clarity, certainty and cost-savings. We suggest several modifications to these methods.

Since the publication of this draft permit, the USGS has published a detailed report (Scientific Investigations Report 2012 – 5292) on the results and findings of an extensive study of enhanced street sweeping practices in Cambridge, Massachusetts. We suggest EPA update the phosphorus reduction efficiency factors in this section to reflect the findings of this study.

EPA may wish to identify a simpler methodology for calculating credits for catch basin cleaning. Given the low maximum credit a permittee can obtain for this credit, there is a high burden of data collection.

We encourage EPA to review several new expert panel reports from the Chesapeake Bay Program prior to finalizing the credits for no phosphorus fertilizer, in particular the Recommendations of the Expert Panel to Define Removal Rates for Urban Nutrient Management published on March 14, 2013 (available at http://www.chesapeakebay.net/publications/title/recommendations_of_the_expert_panel_to_define_removal_rates_for_urban_nutri). In addition, it is not clear to CRWA whether the export load rates for pervious soils in Table 2-1 should be broken out by soil type. Those for hydrologic soil group D (DevPERV HSG D) which will be the default soil group used in many instances because there is not sufficient site specific data, seem very high. It may be more appropriate to use an average load rate, or at least to use HSG C if there is no information available.

Regarding the specific IDDE credit described in this section, see our comments above.

Attachment 3

CRWA believes the resources EPA Region 1 put into developing methodologies and calculation tools for estimating the phosphorus removal of structural practices serve as an outstanding resource for permittees and the public. Over time, as more data becomes available, and more practices are evaluated specifically for phosphorus reduction, EPA may wish to change the credits allowed. Thus we encourage the permit to specify that calculations should be based on the most up to date versions of the Tables and Charts, which may be modified, and direct permittees to a website where such updates will be made available.

We also encourage EPA to continue to evaluate structural practices' effectiveness over time, as well as their effectiveness at removing different types of phosphorus and phosphorus in different states of availability. As new research emerges, the methodologies and calculation tools should be modified accordingly.



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In conclusion, CRWA strongly supports the draft permit overall, and we encourage EPA to finalize it as soon as possible, and to use it as a model for other stormwater permits in the Region. Please do not hesitate to contact me should you have questions.

Sincerely,

Kate Bowditch
Director of Projects



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